

IN THE CLAIMS

Please cancel Claims 10, 11, 24 and 25, without prejudice or disclaimer of subject matter.

Please amend Claims 1-4, 6-9, 12-19 and 21-23, and add Claim 26, to read as follows.

1. (Currently Amended) Apparatus for generating and testing speech models, said apparatus comprising:

a data collection unit operable to collect ~~and store~~ utterance data indicative of the pronunciation of ~~one or more~~ words by ~~one or more~~ speakers;

an utterance store operable to store utterance data collected by said data collection unit, said utterance store being configured to associate each item of stored utterance data with speaker data identifying the speaker from whom said utterance data was collected and word data identifying the words items of utterance data represent;

a speech model generation unit operable to receive user input identifying a user selection comprising a plurality of items of speaker data and one or more items of word data and responsive to receipt of user input to generate speech models of words, ~~utterances of which have been collected by said data collection unit~~ utilizing utterance data stored in said utterance store associated with speaker data and word data corresponding to the input selection of speaker data and word data; and

a testing unit operable to test the accuracy of the matching of utterances collected by said data collection unit to speech models generated by said speech model generation unit

utilizing utterance data stored in said utterance store associated with speaker data and word data corresponding to an input selection of speaker data and word data and to generate a visual display of the results of said testing by said testing unit.

2. (Currently Amended) Apparatus in accordance with claim 1, ~~wherein said data collection unit comprises~~ further comprising:

a vocabulary database operable to store word ~~identifiers~~ data indicative of one or more words; and

a speaker database operable to store speaker ~~identifiers~~ data indicative of speakers from whom utterance data is to be collected, ~~[[;]]~~ and

~~a co-ordination unit~~ wherein said data collection unit is operable:

to generate a first user interface to enable user input of speaker ~~identifiers~~ data for storage in said speaker database;

to generate a second user interface to enable user input of word ~~identifiers~~ data for storage in said vocabulary database; and

to generate a third user interface operable to generate a series of prompts to prompt the utterance of words corresponding to word ~~identifiers~~ data stored in said vocabulary database by speakers identified by speaker ~~identifiers~~ data stored in said speaker database and to ~~synchronise~~ synchronize said series of prompts with the collection of utterance data indicative of pronunciation of words.

3. (Currently Amended) Apparatus in accordance with claim 2, wherein said series of prompts generated by said third user interface comprises a generation of a series of visual instructions to speakers identified by speaker data identifiers in said speaker database to pronounce words identified by word data identifiers stored in said word database.

4. (Currently Amended) Apparatus in accordance with claim ~~[[3]]~~ 2, wherein said third user interface is operable to generate a series of prompts comprising user instructions to stay quiet immediately preceding and succeeding instructions to a speaker identified by an item of speaker data to pronounce a word identified by an item of word identifier data, wherein said collection of utterance data is performed whilst all of said instructions are displayed.

5. (Original) Apparatus in accordance with claim 2, wherein said third user interface is operable to display a waveform indicative of collected utterance data whilst said utterance data is being collected.

6. (Currently Amended) Apparatus in accordance with claim 2, wherein said data collection unit is operable subsequent to the collection of an item of utterance data to generate a user interface to display a waveform corresponding to said collected utterance data and to permit user deletion of stored utterance data corresponding to the waveform displayed by said data collection unit.

7. (Currently Amended) Apparatus in accordance with claim 2, wherein said data collection unit is operable subsequent to the collection of an item of utterance data to output audio data corresponding to said collected utterance data and to permit user deletion of stored utterance data corresponding to audio data output by said data collection unit.

8. (Currently Amended) Apparatus in accordance with claim 2, wherein said data collection unit further comprises a selection unit operable to generate a user interface enabling user selection of speaker ~~identifiers~~ data stored in said speaker database and word ~~identifiers~~ data stored in said vocabulary database wherein said ~~co-ordination~~ data collection unit is ~~operable to generate a third user interface~~ responsive to user selection of speaker data and word data via said selection unit to generate a series of prompts to prompt the utterance of a series of words corresponding to selected word ~~identifiers~~ data by speakers corresponding to selected speaker ~~identifiers~~ data selected utilizing said selection unit.

9. (Currently Amended) Apparatus in accordance with claim ~~[[2]]~~ 8, wherein said ~~co-ordination~~ data collection unit is ~~operable~~ responsive to user selection of speaker data and word data via said selection unit to generate said series of prompts to prompt the utterance of words ~~[[by]]~~ identified by items of word data by speakers identified by items of speaker data a number of times ~~for each of said words and speakers~~ wherein ~~said~~ a number of prompts for a speaker to pronounce a word is determined by the number of items of utterance data stored by said data collection unit associated with ~~said words and said speakers~~ selected items of word and speaker data.

10. (Canceled)

11. (Canceled)

12. (Currently Amended) Apparatus in accordance with claim [[11]] 1, wherein said speech model generation unit further comprises a data store operable to store constraint data wherein said speech model generation unit is operable to determine whether received user input identifying a user selection of one or more items of speaker data and one or more items of word data fulfills the requirements defined by constraint data stored in said data store and to generate speech models of words ~~where said identification of words and speakers made utilizing said selector fulfils~~ if received user input identifies items of speaker and word data which fulfill the requirements defined by said constraint data.

13. (Currently Amended) Apparatus in accordance with claim 12, ~~when said speakers are~~ wherein each said item of speaker data is associated with gender data wherein said constraint data comprises data identifying a relationship [[and]] the gender data ~~of said identified speakers must fulfil~~ associated with items of speaker data is required to fulfill.

14. (Currently Amended) Apparatus in accordance with claim 12, wherein said constraint data comprises data indicative of a number of utterances wherein said speech model generation unit is operable to generate speech models of words when said data collection unit has stored utterance data associated with said identified ~~speakers selected by~~

~~said selector~~ items of speaker data identified by user input corresponding to the required number of repetitions identified by said constraint data of ~~said words selected by said selector~~ words identified by items of word data identified in said user input.

15. (Currently Amended) Apparatus in accordance with claim 1, wherein said testing unit is operable to generate a user interface to enable a user to identify speech models generated by said speech model generation unit and to select utterance data stored by said ~~data collection unit~~ utterance store and to test said identified models utilizing said selected utterances.

16. (Currently Amended) Apparatus in accordance with claim 15, wherein said testing unit is operable to generate a user interface enabling a user to identify sets of utterances collected by said data collection ~~data~~ unit corresponding to utterances indicative of the pronunciation of different words by different speakers, said testing unit being responsive to the selection of said sets of utterance data to test speech models generated by said speech model generation unit utilizing said selected sets selected of utterance data.

17. (Currently Amended) Apparatus in accordance with claim 16, wherein said testing unit is operable to enable user selection of sets of utterances comprising utterance data collected from the speakers from whom utterance data was utilized by said speech model generation unit to generate said speech models being tested.

18. (Currently Amended) Apparatus in accordance with claim 17, wherein said testing unit is operable to enable user selection of sets of utterances comprising utterance data collected from speakers, utterance data from whom was not utilized by said speech model generation unit to generate said speech models being tested.

19. (Currently Amended) A storage medium having computer implementable instructions stored thereon for generating within a programmable computer an apparatus in accordance with any of claims ~~1 to 18~~ 1-9 and 12-18.

20. (Original) A storage medium in accordance with claim 19, comprising a disk.

21. (Currently Amended) A disk storage medium in accordance with claim 20, comprising a magnetic, optical or magneto optical disk.

22. (Currently Amended) A storage medium in accordance with claim 19, comprising an electrical signal in a communications network.

23. (Currently Amended) A method of collecting utterance data, comprising the steps of:

displaying a first user interface to enable user input of speaker identifiers and storing said speaker identifiers in a speaker database;

displaying a second user interface to enable user input of word identifiers and storing said word identifiers in a vocabulary database;

displaying a series of prompts to prompt the utterance of words corresponding to word identifiers stored in said vocabulary database by speakers identified by speaker identifiers stored in said speaker database, each said prompt including data identifying both a word identifier identifying one or more words to be uttered and a speaker identifier identifying by whom an utterance corresponding to a displayed word identifier is to be made; and

~~synchronising~~ synchronizing the collection of utterance data indicative of the pronunciation of words with said series of prompts.

24. (Canceled)

25. (Canceled)

26. (New) Apparatus for generating and testing speech models, said apparatus comprising:

a vocabulary database operable to store word data indicative of one or more words;

a speaker database operable to store speaker data indicative of speakers from whom utterance data is to be collected; and

a data collection unit operable to collect utterance data indicative of the pronunciation of words identified by word data stored in said vocabulary database as spoken by one or more speakers identified by speaker data stored in said speaker database;

wherein said data collection unit is operable:

to generate a first user interface to enable user input of speaker data for storage in said speaker database;

to generate a second user interface to enable user input of word data for storage in said vocabulary database; and

to generate a third user interface operable to generate a series of prompts to prompt the utterance of words corresponding to word data stored in said vocabulary database by speakers identified by speaker data stored in said speaker database, and to synchronize said series of prompts with the collection of utterance data indicative of pronunciation of words.